REMARKS

Response to §112 Rejections of Claim 1

In response to the §112 rejection against claim 1 in the June 6, 2005 Office Action, Applicants have hereby amended claim 1 to delete the rejected limitation "wherein said sidewalls are not substantially altered either chemically or physically." Therefore, claim 1, as amended herein, complies with the requirements of 35 U.S.C. §112, second paragraph.

Response to §§103 Rejections of Claims 1-7

In the June 6, 2005 Office Action, the Examiner rejected claims 1-7 under 35 U.S.C. §103(a) as allegedly obvious over U.S. Patent No. 6,472,231 issued to Gabriel et al. (hereinafter "Gabriel") in view of U.S. Patent No. 6,140,706 issued to Wang et al. (hereinafter "Wang").

In response, Applicants have hereby amended claim 1, from which claims 2-7 depend, to positively recite:

> "An interconnect structure comprising:
>
> a semiconductor substrate comprising one or more device regions; and
>
> one or more interconnect levels located atop the semiconductor substrate, said one or more interconnect levels comprising **a patterned organosilicate dielectric having sidewalls, wherein said sidewalls comprises CH_x species with x = 1-3**."

Support for the above-mentioned amendment of claim 1 is provided by the instant specification on page 8, paragraph [0036], which describes the use of "an *in situ* inert gas/H_2 ash process post via and trench processing in a single or dual damascene scheme," and on page 5, paragraph [0019], which states that: "[h]ydrogen based strip processes will likely form various CH_x (x = 1-3) species, which are less likely to be volatized than CO and CN, thus removing less carbon from the film."

It is clear from the description of the instant specification that during the inert gas/H_2 ash or stripping process, hydrogen radicals from the inert/H_2 plasma enter the OSG sidewalls and react with the carbon atoms contained in the OSG to form less volatile CH_x (x = 1-3) species. Therefore, the OSG sidewalls, after the inert gas/H_2 ash or stripping process, comprise a certain amount of CH_x (x = 1-3) species, which is less likely to be volatized than CO and CN and therefore results in less damage to the OSG sidewalls.

The primary reference, Gabriel, only discloses conventional photoresist removal processes. **The applied primary reference does not, in any manner, teach or suggest the use of an inert gas/H_2 photoresist removal process, much less OSG sidewalls comprising CH_x (x = 1-3) species**, which are formed as a result of using such an inert gas/H_2 photoresist removal process, as positively recited by claims 1-7 of the present application.

The secondary reference, Wang, discloses use of two additional dielectric layers to protect an HSQ dielectric layer from conventional oxygen-based photoresist removal process. Like Gabriel, nothing in Wang teaches or suggests the use of an inert gas/H_2 photoresist removal process. More importantly, the HSQ dielectric layer disclosed by Wang does not contain sidewalls that comprise CH_x species, as presently recited by claims 1-7.

Therefore, Wang cannot remedy the deficiency of the Gabriel reference.

In summary, claims 1-7 of the present application patentably distinguish over the cited references by positively reciting a patterned organosilicate dielectric having sidewalls that comprises CH_x species with x = 1-3.

Based on the foregoing, claims 1-7, as amended herein and now pending in the application, are in form and condition for allowance. Issue of a Notice of Allowance for the application is therefore requested.

If any issues remain outstanding, incident to the formal allowance of the application, the Examiner is requested to contact the undersigned attorney at (516) 742-4343 to discuss same, in order that this application may be allowed and passed to issue at an early date.

Respectfully submitted,

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